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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,287	12/24/2001	Rudolf Van den Bergh	27500-71	4574

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EXAMINER

THOMPSON, CAMIE S

ART UNIT PAPER NUMBER

1774

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/036,287	BERGH ET AL.	
	Examiner	Art Unit	
	Camie S Thompson	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed January 15, 2004 have been acknowledged.
2. Examiner acknowledges amended claim 20.
3. The objection to the priority is withdrawn due to applicant's submission of a certified copy of the foreign priority document.
4. The objection to the Information Disclosure Statement is withdrawn due to applicant's submission of the PTO-Form 1449.
5. The rejection of claim 20 under 35 U.S.C. 112, second paragraph is withdrawn due to applicant's amended claim 20.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7, 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al., U.S. Patent Number 6,344,657 in view of EP-0510754
Matsumoto discloses a stimuable phosphor sheet (or radiation image panel) having a transparent support film, a stimuable phosphor layer, a binding medium, a protective film coating and particles of titanium dioxide present in the film as per instant claims 1 -3 (see column 4, lines 40-68 and column 7, lines 21-39). The reference also discloses that the binder medium can include

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polyalkyl(meth)acrylate, vinyl chloride-vinyl acetate copolymer or a linear polyester as per instant claims 7 and 17 (column 6, lines 14-22). Additionally, the reference discloses that the ratio between the binder and the phosphor can be 1:1 to 1:100 as per instant claim 16 (see column 6, lines 34-44). It is disclosed in the reference that BaFBr:Eu can be used as a stimulable phosphor as per instant claim 18 (see Example 1). Although the reference does not disclose the surface roughness in the range of 3 to 8 microns, the reference does disclose that the surface roughness can be altered due to heating and pressing. The European reference discloses a luminescent article that can be in the form of a panel which comprises a self-supporting or supported layer of phosphor particles dispersed within a resin binder having a protective coating applied thereto (see abstract and page 2-3). The European reference also discloses that the surface roughness for the protective coating is about 8 microns, or at least 3 microns. The surface roughness of the protective coating affects the image sharpness as described by the European reference (see page 3, detailed description). Therefore, it would have been obvious to one of ordinary skill in the art to have a surface roughness of the protective coating be in the range of 3-8 microns in order to obtain excellent image sharpness. Claim 20 is a product-by-process claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. The Matsumoto and European references both disclose a protective coating, as does the applicant. The manner in which the protective

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coating is applied does not make the protective coating a different product. Therefore, the protective coating of the Matsumoto reference is the same as applicant's protective coating.

8. Claims 1-3 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al., U.S. Patent Number 6,344,657 in view of European Patent, EP 0510754 and in further view of Kuriyama et al., U.S. Patent Number 5,925,473.

Matsumoto discloses a stimuable phosphor sheet (or radiation image panel) having a transparent support film, a stimuable phosphor layer, a binding medium, a protective film coating and particles of titanium dioxide present in the film as per instant claims 1 -3 (see column 4, lines 40-68 and column 7, lines 21-39). Although the reference does not disclose the surface roughness in the range of 3 to 8 microns, the reference does disclose that the surface roughness can be altered due to heating and pressing. The European reference discloses a luminescent article that can be in the form of a panel which comprises a self-supporting or supported layer of phosphor particles dispersed within a resin binder having a protective coating applied thereto (see abstract and page 2-3). The European reference also discloses that the surface roughness for the protective coating is about 8 microns, or at least 3 microns. The surface roughness of the protective coating affects the image sharpness as described by the European reference (see page 3, detailed description). Therefore, it would have been obvious to one of ordinary skill in the art to have a surface roughness of the protective coating be in the range of 3-8 microns in order to obtain excellent image sharpness. Neither Matsumoto nor the European reference discloses the amount of white pigment present in the composition. Kuriyama teaches a radiation image storage panel having a stimuable phosphor layer, a resin binder and a protective film wherein titanium dioxide is used as light-scattering particles (see abstract and Examples 4 to 6). The Kuriyama reference also

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discloses that the light-scattering fine particles can be present in the amount of 1 to 30 weight percent as per instant claims 11-15 (see column 3, lines 10-13). The amount of titanium dioxide present in the composition affects the dispersability of the particles in the resin composition and greater light-scattering effect. Therefore, it would have been obvious to one of ordinary skill in the art to have the titanium dioxide present in the amount of 1 to 30 weight percent in order to achieve greater light scattering due to increased particle dispersion.

9. Claims 1-3 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al., U.S. Patent Number 6,344,657 in view of European Patent, EP- 0510754 and in further view of Van Havenbergh et al., U.S. Patent Number 5,466,541.

Matsumoto discloses a stimuable phosphor sheet (or radiation image panel) having a transparent support film, a stimuable phosphor layer, a binding medium, a protective film coating and particles of titanium dioxide present in the film as per instant claims 1 -3 (see column 4, lines 40-68 and column 7, lines 21-39). Although the reference does not disclose the surface roughness in the range of 3 to 8 microns, the reference does disclose that the surface roughness can be altered due to heating and pressing. The European reference discloses a luminescent article that can be in the form of a panel which comprises a self-supporting or supported layer of phosphor particles dispersed within a resin binder having a protective coating applied thereto (see abstract and page 2-3). The European reference also discloses that the surface roughness for the protective coating is about 8 microns, or at least 3 microns. The surface roughness of the protective coating affects the image sharpness as described by the European reference (see page 3, detailed description). Therefore, it would have been obvious to one of ordinary skill in the art to have a surface roughness of the protective coating be in the range of 3-8 microns in order to obtain excellent

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image sharpness. Neither reference discloses using a urethane acrylate polymer as the binder as per instant claims 8-10. Van Havenbergh teaches a luminescent radiographic system comprising a support, a phosphor-binder layer and a protective film layer (see abstract and column 3, line 14-column 4, line 28). Van Havenbergh teaches an aromatic polyester-urethane acrylate used as the binder. The use of a urethane acrylate assists with the anticurling of the protective film. Therefore, it would have been obvious to one of ordinary skill in the art to use a urethane acrylate in order to compensate for the surface contracting tensile stress as shown by the Van Havenbergh reference in column 14, lines 26-36.

10. Claims 1 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al., 6,344,657 in view of European Patent, EP-0510574 and in further view of Yamazaki et al., U.S. 4,728,583.

Matsumoto discloses a stimuable phosphor sheet (or radiation image panel) having a transparent support film, a stimuable phosphor layer, a binding medium, a protective film coating and particles of titanium dioxide present in the film as per instant claim 1 (see column 4, lines 40-68 and column 7, lines 21-39). Although the reference does not disclose the surface roughness in the range of 3 to 8 microns, the reference does disclose that the surface roughness can be altered due to heating and pressing. The European reference discloses a luminescent article that can be in the form of a panel which comprises a self-supporting or supported layer of phosphor particles dispersed within a resin binder having a protective coating applied thereto (see abstract and page 2-3). The European reference also discloses that the surface roughness for the protective coating is about 8 microns, or at least 3 microns. The surface roughness of the protective coating affects the image sharpness as described by the European reference (see page 3, detailed description).

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Therefore, it would have been obvious to one of ordinary skill in the art to have a surface roughness of the protective coating be in the range of 3-8 microns in order to obtain excellent image sharpness. Neither reference discloses using CsBr:Eu stimuable phosphor as per instant claim 19. Yamazaki teaches a radiation image storage panel comprising a support, a phosphor layer which comprises a binder and a stimuable phosphor and a protective film coating (see abstract and column 3, line 15-column 4, line 21). The Yamazaki reference also discloses that CsBr:Eu is used as a stimuable phosphor (see column 8, lines 35-60). The use of a cesium bromide phosphor gives stimulated emission when excited. Therefore, it would have been obvious to one of ordinary skill in the art to use a cesium bromide phosphor as the stimuable phosphor in order to provide high luminance as shown by the Yamazaki reference in column 8, line 66-column 9, line 3.

Response to Arguments

11. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (571) 272-1526. The fax phone number for the Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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